

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Previously Presented) A method for providing secure transmissions across a network comprising a client device and a server, the method comprising:

at the client device, generating a stream of watermark bits;

generating a plurality of watermarks, each of the plurality of watermarks comprising a respective index number and a respective portion of the stream of watermark bits;

inserting the plurality of watermarks into respective headers of a plurality of outgoing packets;

receiving, at the server, the plurality of outgoing packets; and

determining if a received packet is valid based on the watermark in the header of the received packet.

2. (Previously Presented) The method of claim 1, wherein generating the stream of watermark bits includes generating a stream of watermark bits from an authorization and synchronization packet previously exchanged between the client device and the server.

3. (Previously Presented) The method of claim 1, further comprising activating a session by exchanging an authorization and synchronization packet between the client device and the server.

4. (Original) The method of claim 1, further comprising:
discarding the packet, if the watermark is not valid.
5. (Original) The method of claim 1, wherein determining if a received packet is valid comprises:
comparing the watermark of the received packet to a first and a second window, each of the windows comprising a set of expected watermarks; and
accepting the watermark as valid if the received watermark matches one of the expected watermarks in the first or second windows.
6. (Previously Presented) The method of claim 5, wherein the set of expected watermarks are generated from an authorization and synchronization packet previously exchanged between the client device and the server.
7. (Previously Presented) The method of claim 5, comprising:
discarding the packet, if the watermark does not match one of the expected watermarks in the first or second windows.
8. (Previously Presented) The method of claim 5, wherein comparing the watermark further comprises:
maintaining at the server a record of a pivotal index number representing the index number of the highest-numbered valid watermark received from the client device; and

comparing the watermark of the received packet to a first and a second window, each of the windows comprising a set of expected watermarks and wherein the first window represents expected watermarks whose index numbers precede the pivotal index number and the second window represents expected watermarks whose index numbers immediately supersede the pivotal index number.

9. (Original) The method of claim 8, comprising:

increasing the pivotal index number if a match is found in the second window and deleting the matching expected watermark from the second window.
10. (Original) The method of claim 1, wherein the stream of watermark bits is generated by a stream cipher.
11. (Original) The method of claim 1, wherein inserting at least one of the plurality of watermarks includes determining whether a valid session exists and inserting the at least one of the plurality of watermarks only if the valid session exists.
12. (Previously Presented) A system for providing secure transmissions across a network, the system comprising:

a client device for

generating a stream of watermark bits;

generating a plurality of watermarks, each of the plurality of watermarks comprising a respective index number and a respective portion of the stream of watermark bits;

inserting the plurality of watermarks into respective headers of a plurality of outgoing packets; and

transmitting the outgoing packets to a server; and

a server for

receiving the plurality of outgoing packets; and

determining if a received packet is valid based on the watermark in the header of the received packet.

13. (Previously Presented) The system of claim 12, wherein the stream of watermark bits are generated from an authorization and synchronization packet previously exchanged between the client device and the server.

14. (Original) The system of claim 12, wherein inserting at least one of the plurality of watermarks includes determining whether a valid session exists and inserting the at least one of the plurality of watermarks only if the valid session exists.

15. (Previously Presented) The system of claim 12, wherein the server further discards the packet, if the watermark is not valid.

16. (Previously Presented) The system of claim 12, wherein the server further determines if a received packet is valid by comparing the watermark of the received packet to a first and a second window, each of the windows comprising a set of expected watermarks; and

accepting the received watermark as valid if the received watermark matches one of the expected watermarks in the first or second windows.

17. (Previously Presented) The system of claim 16, wherein the server further discards the packet, if the received watermark does not match any expected watermarks in the first or second windows.

18. (Previously Presented) The system of claim 16, wherein comparing the watermark further comprises:

maintaining at the server a record of a pivotal index number representing the index number of the highest-numbered valid watermark received from the client device; and

comparing the watermark of the received packet to a first and a second window, each of the windows comprising a set of expected watermarks and wherein the first window represents expected watermarks whose index numbers precede the pivotal index number and the second window represents expected watermarks whose index numbers immediately supersede the pivotal index number.

19. (Previously Presented) The system of claim 18, wherein the server increases the pivotal index number if a match is found in the second window and deletes the matching expected watermark from the second window.

20. (Previously Presented) The system of claim 12, wherein the stream of watermark bits is generated by a stream cipher.

21. (Previously Presented) A system for providing secure transmissions across a network from a client device to a server, the system comprising:

means for generating a stream of watermark bits;

means for generating a plurality of watermarks, each of the plurality of watermarks comprising a respective index number and a respective portion of the stream of watermark bits;

means for inserting the plurality of watermarks into respective headers of a plurality of outgoing packets; and

means for transmitting the outgoing packets to a server capable of determining if a received packet is valid based on the watermark in the header of the received packet.

22. (Previously Presented) The method of claim 1, wherein each of the plurality of watermarks comprises a different respective index number and a different respective portion of the stream of watermark bits.

23. (Previously Presented) The method of claim 1, wherein each of the plurality of watermarks comprises a different respective index number and a respective portion of the stream of watermark bits.

24. (Previously Presented) The system of claim 12, wherein each of the plurality of watermarks comprises a different respective index number and a different respective portion of the stream of watermark bits.

25. (Previously Presented) The system of claim 12, wherein each of the plurality of watermarks comprises a different respective index number and a respective portion of the stream of watermark bits.